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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,302	01/04/2006	Toshiki Kobayashi	113.45730X00	8395

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ARLINGTON, VA 22209-3873

EXAMINER
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MAI, TIEN HUNG

ART UNIT	PAPER NUMBER
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2836

MAIL DATE	DELIVERY MODE
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11/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,302	<b>Applicant(s)</b> KOBAYASHI ET AL.	
	<b>Examiner</b> Tien Mai	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Application number 10/563,302 for "electrostatic chuck for substrate stage, electrode used for the chuck, and treating system having the chuck and the electrode" filed on 01/04/2006 has been examined.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-11, 19-24 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida (US 4,848,536 "Machida").

**In re claims 1 and 19**, Machida discloses apparatus for transporting an electrically conductive wafer; the apparatus (fig. 6) comprises: a plurality of electrodes (1-1 through 1-5) are disposed in parallel (col. 3, lines 30-33 and fig. 17).

**In re claims 2 and 20**, Machida discloses that the electrodes are different in width (figs. 15 (a) through 15 (e)).

**In re claims 3 and 21**, Machida discloses that the electrodes are disposed with a predetermined clearance from one another (figs. 6 and 7).

**In re claims 4 and 22**, Machida discloses that the electrodes are disposed along an edge portion of a substrate to be treated (see fig. 17).

**In re claims 5 and 23**, Machida discloses that wiring to the electrodes can be changed over to bi-pole (col. 6, lines 36-54 and fig. 11).

**In re claims 6 and 24**, Machida discloses that the electrodes are made of bar-like base material (col. 3, lines 37-39 and see figs. 7 and 15(a)).

**In re claims 8 and 26**, Machida discloses that sectional shapes of the base materials are squares (fig. 15(e)).

**In re claims 9 and 27**, Machida discloses that sectional shapes of the base materials are wide rectangles (col. 7, lines 51-54 and fig. 15(a)).

**In re claims 10 and 28**, Machida discloses that sectional shapes of the base materials are stepped shapes (fig. 15(e)).

**In re claims 11 and 29**, Machida discloses that section shapes of the base materials are arranged like roofing tiles each of which has a curved convex portion in one side and a curved concave portion in the other side, and said electrodes are disposed with a predetermined clearance between said convex portion of one electrode and said concave portion of another adjacent electrode (fig. 15(d)).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 13-17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida in view of Motoaki (JP62211363 "Motoaki").

**In re claims 7 and 25**, Machida discloses the limitation as discussed above. Machida does not teach highly pure ceramic is thermally sprayed on surfaces of the base materials to form a thermally sprayed film. Motoaki teaches spraying thin film of ceramics onto a base material. The ceramic coating provided adhesive powder and corrosion resistance for base material (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to spray a ceramic material onto a base surface to provide a corrosion resistance base surface to protect the base material (abstract).

**In re claim 13**, Machida discloses apparatus for transporting an electrically conductive wafer; the apparatus (fig. 6) comprises: electrodes are made of bar-like base material (col. 3, lines 37-39 and see figs. 7 and 15(a)). Machida does not teach highly pure ceramic is thermally sprayed on surface of the electrodes to form a thermally sprayed film. Motoaki teaches spraying thin film of ceramics onto a base material. The ceramic coating provided adhesive powder and corrosion resistance for base material (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to spray a ceramic material onto a base surface to provide a corrosion resistance base surface to protect the base material (abstract).

**In re claim 14**, Machida discloses that sectional shapes of the base materials are squares (fig. 15(e)).

**In re claim 15**, Machida discloses that sectional shapes of the base materials are wide rectangles (col. 7, lines 51-54 and fig. 15(a)).

**In re claim 16**, Machida discloses that sectional shapes of the base materials are stepped shapes (fig. 15(e)).

**In re claim 17**, Machida discloses that sectional shapes of the base materials are shapes like roofing tiles each of which has a curved convex portion in one side and a curved concave portion in the other side (fig. 15(d)).

Claims 12 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida in view of Hiramatsu et al. (Pub 2003/0044653 "Hiramatsu").

**In re claims 12 and 30**, Machida discloses the limitation as discussed above. Machida does not teach the base materials are made of highly pure isotropic graphite. Hiramatsu discloses aluminum nitride sintered compact, ceramic substrate, ceramic heater and electrostatic chuck; the apparatus comprises an isotropic graphite material formed in a form of a disc to provide low thermal expansion ([0500]). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to choose material having low thermal expansion, such as isotropic graphite to limit the expansion of the chuck so that the ceramic coating does not crack.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Machida in view of Motoaki and further in view of Hiramatsu.

In re claim 18, Machida and Motoaki disclose the limitations as discussed above. Neither Machida nor Motoaki disclose the base materials are made of highly pure isotropic graphite. Hiramatsu discloses aluminum nitride sintered compact, ceramic substrate, ceramic heater and electrostatic chuck; the apparatus comprises an isotropic graphite material formed in a form of a disc to provide low thermal expansion ([0500]). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to choose material having low thermal expansion, such as isotropic graphite to limit the expansion of the chuck so that the ceramic coating does not crack.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Mai whose telephone number is 571-270-1277. The examiner can normally be reached on M-Th: 7:00-5:00.

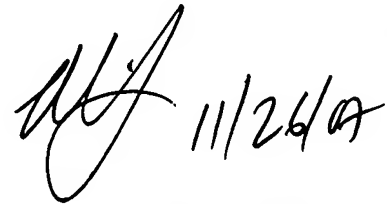
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TM



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